

Action dated October 7, 1999 (U.S. Patent Office Paper No. 6). In view of the above amendments and the following remarks, the Examiner is respectfully requested to give due reconsideration to this application, to indicate the allowability of the claims, and to pass this case to issue.

Claims 1-69 were under consideration in this application. Claims 1, 6-7, 10-11, 14-19, 32, 42, 45-47, 60, 62, and 64-68 have been amended to more particularly point out and distinctly claim that which applicants regard as the invention. Claims 20-24 and 48-52 have been canceled from the application in order to obviate the objection to the drawings and specification. In addition, applicants are submitting corrected formal drawings which are believed to meet the requirements of the Examiner and the PTO Draftsperson. Applicants hereby submit that no new matter is being introduced into the application through the submission of this response.

Technical Objections and Rejections

The Examiner has objected to the drawings as failing to identify the apparatus of Fig. 1 as "Prior Art" and as failing to show every feature of the invention specified in the claims. In addition, the PTO Draftsperson objected to the drawings on formal grounds. Applicants are submitting herewith corrected formal drawings which comply with various subsections of 37 C.F.R. § 1.84 and §1.152, and which include the required legend. An indication that the corrected formal drawings are approved is most respectfully requested.

Claims 20-24 and 48-52 stand rejected under 35 U.S.C. § 112, first paragraph, for the reasons set forth in the objection to the specification. This rejection is believed to have been obviated by the cancellation of those claims for which adequate teaching is allegedly lacking, and it is most respectfully requested that this rejection be withdrawn.

Claims 17-19 stand rejected under the second paragraph of 35 U.S.C. § 112. The Examiner has kindly suggested amendments to these claims to overcome this rejection, and applicants have adopted said suggestions. Accordingly, it is most respectfully requested that this rejection be withdrawn.

Prior Art Rejections

Claims 1-13, 25-44, 53--64 and 67-69 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Stockford *et al.* Claims 1-69 are rejected under 35 U.S.C. § 102(b) as being anticipated by Bielefeldt. Claims 20-24 and 48-52 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Stockford. These rejections have been carefully considered, but are most respectfully traversed.

Applicants most respectfully submit that, while Stockford does disclose a non-baffled inner wall, it does not meet the requirements of claim 1 as presently amended. Reviewing Figure 2 of Stockford, it can be seen that the air inlet extends part way around the interior chamber of separator 10. The air flow is shown by arrows in Figure 2. There is no dead air space which is shown in Figure 2 nor is there any second cyclone which is exterior to the inner cyclone which is generated by the air inlet.

Applicants have amended the claims to emphasize that the application is directed to a cyclone chamber having an inner cyclone and at least one cyclone positioned exterior to the inner cyclone. The outer cyclone is not generated by a separate air inlet. Instead, it is generated by the construction and arrangement of the outer wall of the cyclone chamber. Effectively, the inner cyclone induces the creation of the outer cyclone.

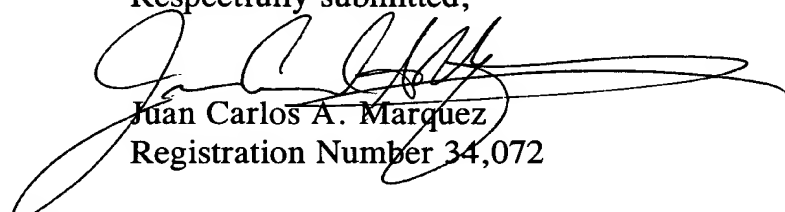
With respect to Bielefeldt, applicants submit that the air flow pattern is shown in particular in Figure 1 as well as in Figures 3 and 5. While Figure 1 shows what

appears from Figure 3 to be a first cyclone in vortex chamber 50 and a second cyclone in suction tubes 35, these cyclones are sequential and are in separate chambers. The applicants use a single chamber which has a contiguous space in which the outer cyclone and the inner cyclone coexist.

In view of all the above, Applicants respectfully submit that certain clear and distinct differences as discussed exist between the present invention as now claimed and the prior art references upon which the rejections in the Office Action rely. These differences are more than sufficient that the present invention as now claimed would not have been anticipated nor rendered obvious given the prior art. Rather, the present invention as a whole is distinguishable, and thereby allowable over the prior art.

Favorable reconsideration of this application as amended is respectfully solicited. Should there be any outstanding issues requiring discussion that would further the prosecution and allowance of the above-captioned application, the Examiner is invited to contact the Applicant's undersigned representative at the address and phone number indicated below.

Respectfully submitted,



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